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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Complete if Known					
Application Number	10/688,416				
Filing Date	October 17, 2003				
First Named Inventor	David Charles Schwartz				
Art Unit					
Examiner Name					
Attorney Docket Number	060206 00120	_			

			U. S. PATENT	DOCUMENTS	
Examiner Initials*	Cite No.1	Document Number Number-Kind Code ^{2 (f known)}	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
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V		^{US-} 6,610,256	08-26-2003	Schwartz	
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		FOREI	IGN PATENT DOCL	JMENTS	· · · · · · · · · · · · · · · · · · ·	
Examiner Initials*	Cite No.	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages	
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:/SKM		WO 94/18218	08-18-1994	Seq, Ltd.		
\1/		WO 00/09757	02-24-2000	U.S. Genomics		
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Examiner Signature	/Stephanie Mummert/ (05/29/2007)	Date Considered	05/29/2007	

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INFORMATION DISCLOSURE				Filing Date	October 17, 2003	_
STATEMENT BY APPLICANT			PPLICANT	First Named Inventor	David Charles Schwartz	
				Art Unit		
	(Use as many s	heets as t	iecessary)	Examiner Name		
Sheet	2	of	2	Attorney Docket Number	960296.00129	J

	ite Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of	
	o. the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
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/SKM/	2001, IEEE International Micro Electro Mechanical Systems Conference, New York, NY: IEEE, US, vol. CONF. 14, (01-21-2001), pgs 375-384, XP010534628 ISBN: 0-7803-5998-4, pg 378-379.	·-
/SKM/	Unger M A Et Al: "Monolithic Microfabricated Valves and Pumps by Multilayer Soft Lithography", Science, American Association For The Advancement Of Science, US, vol. 288, 04/07/2000, pgs. 113-116, XP002192277 ISSN: 0036-8075 Figure 1.	
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Prior art cited fram 2.5. Patent No. 6,610,256

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	. 1446 16	Application Number	10/688,416	
INFORMATION DISCLOSURE		Filing Date	October 17, 2003	
		First Named Inventor	David Charles Schwartz	
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	Cite No.1	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages	Γ
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V		WO 84/02001	May, 1984	Trustees of Columbia Univers		Г
V		WO 87/01955	Sep., 1987	Washington University		
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Subatitu	Substitute for form 1449/PTO		Complete if Known			
Substitute for form 14437 10				Application Number	10/688,416	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Filing Date	October 17, 2003	
				First Named Inventor	David Charles Schwartz	
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Sheet	2	of	7	Attorney Docket Number	960296.00129	フ

			OTHER PRIOR ART-NON PATENT LITERATURE DOCUMENTS					
Examiner Initials* Cite No.1		Cite Include name of the author (In CAPITAL LETTERS), title of the article (when appropriate), title of						
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Examiner Signature /Stephanie Mummert/ (05/29/2007)	Date Considered	05/29/2007
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Substitu	ute for form 144	498/PTO	_		Complete if Known		
					Application Number	10/668,416	
INF	ORMAT	LION I	DISCL	.OSURE	Filing Date	October 17, 2003	
STA	TEME	NT RY	/ APP	LICANT	First Named Inventor	David Charles Schwartz	
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Sheet	3	O	7		Attorney Docket Number	960296.00129	

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¹ Unique citation designation number. 2 Applicant is to place a check mark here if English language Translation is attached.

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Sheet	4	of	7	Attorney Docket Number	960296.00129	

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Substitu	ute for form 1449B/PTC)	Complete if Known		
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INF	DRMATION	I DISCLOSURE	Filing Date	October 17, 2003	
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Sheet	5	of 7	Attorney Docket Number	960296.00129	

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Examiner Cite No.1		item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T
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		Smith et al., 1989, "Observation of Individual DNA Molecules Undergoing el Electrophoresis", Science 242:203-206.	
\downarrow		Smith and Birnstiel, 1976, "A Simple Method for DNA Restriction Site Mapping", Nucl. Acids Res. 3:2387-2399.	

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Sheet	7	of	7	Attorney Docket Number	960296.00129		

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		Stallings et al., 1990, "Physical Mapping of Human Chromosomes by Repetitive Sequence Fingerprinting", Proc. Natl. Acad. Sci. USA 87:6218-6222.								
		Stellwagen, 1988, "Effect of Pulsed and Reversing Electric Fields on the Orientation of Linear and Supercolled DNA Molecules in Agarose Gels", Biochemistry 27:6417-6424.								
		Stellwagen, N.C., 1985, "Orientation of DNA Molecules in Agarose Gels by Pulsed Electric Fields", J. Biomo. Str. and Dynam. 3:299-314.								
		Sturn and Weill, 1989, "Direct Observation of DNA Chain Orientation and Relaxation by Electric Birefrigence: Implications for the Mechanism of Separation During Pulsed-Field Gel Electrophoresis:, Physical Rev. Letters 62:1484-1487								
		van den Engh et al., 1992, "Estimating Genomic Distance from DNA Sequence Location in Cell Nuclei by a Random Walk Model", Science 257:1410-1412.								
		Williams, 1977, "Use of Polylisine for Adsorbtion of Nucleic Acids and Enzymes to Electron Microscope Specimen Films:, Proc. Natl. Acad. Sci. USA 74:2311-2315.								
		Woolf et al., 1988, "Mapping Genomic Organization by Field Inversion and Two Dimensional Gel Electrophoresis", Nucl. Acids. Res. 16:3863-3875.								
		Yanagida et al., 1983, "Dynamic Behaviors of DNA Molecules in Solution" Cold Spring Harbor Symp. Quant. Biol. 47:177-187.								
		Zenhausern et al., 1992, "Imaging of DNA by Scanning Force Microscopy", J. Struct. Biol. 108:69-73.								
\bigvee		Zubay, 1988, Biochemistry (Macmillan Publishing Company, New York) pp. 918-919.								
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Application Number	10/688,416
Filing Date	October 17, 2003
First Named Inventor	David Charles Schwartz
Art Unit	
Examiner Name	
Attorney Docket Number	960296.00129

				DOCUMENTS	
Examiner Initials*	Cite No. ¹	Document Number Number-Hand Code ^{2 (f known)}	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Belevant Passages or Relevant Figures Appear
•		US- 4,473,45%	Sep., 1984	Cantor et al.	204/180
		US- 4,695,548	Sep., 1987	Cantor et al.	435/179
		^{US-} 4,737,251	Apr., 1988	Carle et al.	204/182
		^{US-} 4,767,700	Aug., 1988	Wallace	435/6
		^{US-} 4,870,004	Sep., 1989	Conroy et al.	435/6
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		FR 2605472	Apr., 1988	Alain Bouillet		
		WO 84/02001	May, 1984	Trustees of Columbia Univers		
		WO 87/01955	Sep., 1987	Washington University		
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INFORMATION DISCLOSURE	Filing Date	October 17, 2003	
STATEMENT BY APPLICANT	First Named Inventor	David Charles Schwartz	7
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Sheet 2 of 8	Attorney Docket Number	960296.00129	

ं		OTHER PRIOR ART-NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
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Substitute for form 1449B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Complete if Known 10/668,416 **Application Number** October 17, 2003 Filing Date **David Charles Schwartz** First Named Inventor **Group Art Unit Examiner Name**

(use as many sheets as necessary) of | Sheet 8

Attorney Docket Number 960296.00129

-		OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS	
Examiner Initials'	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	Τ²
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		Guo et al., 1993, "Sizing of Large DNA Molecules by Hook Formation in a Loese Matrix", J. Biomol. Struct. and Dynam. 11: 1-10.	

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Application Number

October 17, 2003 Filing Date **David Charles Schwartz First Named Inventor Group Art Unit Examiner Name**

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	Southern 1975, "Detection of Specific Sequences among DNA Fragments Separated by Gel Electrophotesis", J. Mol. Biol. 98: 503-517.	
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		_		Application Number	10/668,416	_
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STA	TEMENT	BY	APPLICANT	First Named Inventor	David Charles Schwartz	
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Deet 1 of 9 Attorney Docket Number 960296.00129

Examiner Initials*	Cite No.1	Document Number Number-Kind Code ² (* known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
/SKM/		^{US-} 4,473,452	Sep., 1984	Cantor et al.	
		^{US-} 4,695,548	Sep., 1987	Cantor et al.	
		^{US-} 4,737,251	Apr., 1988	Carle et al.	
		^{US-} 4,767,700	Aug., 1988	Wallace	
		^{US-} 4,870,004	Sep., 1989	Conroy et al.	
		^{US-} 5,059,294	Oct., 1991	Lizardi	
		^{US-} 5,079,169	Jan., 1992	Chu et al.	
		^{US-} 5,314,829	May, 1994	Coles	436/165
¥		^{US-} 5,380,833	Jan., 1995	Urdea	
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'/SKM		FR 2605472	Apr., 1988	Alain Bouillet		
\[/		WO 84/02001	May, 1984	Trustees of Columbia Univers		
V		WO 87/01955	Sep., 1987	Washington University		
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INF	ORMATION	DIS	CLOSURE	Filing Date	October 17, 2003	
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INF	ORMA	TION D	DISCLOSURE	Filing Date	October 17, 2003		
STATEMENT BY APPLICANT			APPLICANT	First Named Inventor	David Charles Schwartz		
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Sheet	6	of	9	Attorney Docket Number	960296.00129		

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/SKM/		Romling et al., 1989, "A physical genome map of Pseudomonas aeruginosa", EMBO J. 8(13): 4081-4089.						
		Smith et al., 1989, "Observation of Individual DNA Molecules Undergoing Gel Electrophoresis", Science 242: 203.						
		Kucherlapati et al., 1988, Genetic Recombination pp. 92-106.	 					
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		Woolf et al., 1988, "Mapping genomic organization by field inversion and two dimensional gel electrophoresis", Nucleic Acids Research 16(9): 3863.						
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Examiner Signature /Stephanie Mummert/ (05/29/2007)	Date Considered	05/29/2007
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/SKM		Chattoraj et al., 1978, "DNA Coordination with polyamines", J. Mol. Biol. 121: 327.							
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		Zubay, Biochemistry, 1988, pp. 918-919.	
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Examiner Signature	/Stephanie Mummert/ (05/29/2007)	Date Considered	05/29/2007

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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Substitute for form 1449B/PTO	Complete if Known			
	Application Number	10/668,416		
INFORMATION DISCLOSURE	Filing Date	October 17, 2003		
STATEMENT BY APPLICANT	First Named Inventor	David Charles Schwartz		
	Group Art Unit			
(use as many sheets as necessary)	Examiner Name			
Sheet 9 of 9	Attorney Docket Number	960296.00129		

OTHER PRIOR ART NON PATENT LITERATURE DOCUMENTS							
Examiner Initials	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T2				
/SKM/		R. C.Williams, "Use Of POlylysine For Adsorption Of Nucleic Acids and Enzymes To Electron Microscope Specimen Films", Proc. Natl. Acad. Sci. USA, vol. 74, No. 6, pp. 2311-2315, Jun. 1977.					
/SKM	/	F. Fish et al., "A sensitive Solid Phase Microradioimmunoassay For Anti-Dougle Stranded DNA Antibodies", Arthritis and Rheumatism, vol. 24, No. 3 (Mar. 1981).					
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